The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-12, 14 and 19 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-46 of U.S. Patent No. 7,119,136 and claims 1-47 of U.S. Patent No. 7,101,923 (these are patents of the previously recited copending applications). Although the conflicting claims are not identical, they are not patentably distinct from each other because the functionalized PPE resin and amounts thereof in said patents encompass the instant ester capping groups and amounts and since the instantly recited "comprising" permits other components. The impact modifier in claim 1 is an optional component when a flame retardant is used.

Again, applicant failed to submit a terminal disclaimer.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-12, 14 and 16-21 are rejected under 35 U.S.C. 103(a) as obvious over White et al (US 4,760,118) in view of Geprags et al (US 2003/0130403 A1), and further in view of Adedeji et al (US 6,872,777) and Jalbert et al (US 4,654,405).

White et al teach reaction of PPE in a melt with at least one ester of salicyclic acid or anthranilic acid for end-capping is taught at col. 5, lines 9-14. The instant viscosity is taught at col. 5, lines 23-25. Melt extrusion for capping is taught at bottom of col. 4, and addition of a capping agent at down stream of an extruder after PPE has been melted would be a *prima facie* obviousness since it would yield a faster reaction (capping).

The instant invention further recites various additives such as impact modifier, reinforcing fillers and flame retardant over White et al. However, use of such additives in thermoplastic composition in order to improve mechanical properties is well known as taught by Geprags et al, various experiments in tables wherein glass fiber, polystyrene and hydrogenated SEBS block copolymer are seen. Use of flame retardant is also taught in [0103].

Adedeji et al teach various additives such as hydrogenated SEBS block copolymer, thermal stabilizers and glass fiber to improve mechanical properties for PPE at cols. 9-14 and table 2.

Jalbert et al also teach art well known additives such as impact modifiers, stabilizers, antioxidants and fillers for thermoplastic compounding art at col. 4, lines 33-58. Kraton G impact modifier is taught in example 17, and said Kraton G is also taught by Geprags et al as hydrogenated SEBS block copolymer.

It would have been obvious to one skilled in the art at the time of invention to utilize the art well known additives such as impact modifier, reinforcing fillers and/or flame retardant for thermoplastics such as PPE taught by Geprags et al in White et al in order to improve mechanical properties and/or to impart flame retardancy since such practice is well known in the art as further evidenced by Adedeji et al and Jalbert et al.

Claims 1-6, 8-12, 14 and 16-21 are rejected under 35 U.S.C. 103(a) as obvious over White et al (US 4,760,118) in view of Adedeji et al (US 6,872,777) and Jalbert et al (US 4,654,405).

White et al teach reaction of PPE in a melt with at least one ester of salicyclic acid or anthranilic acid for end-capping is taught at col. 5, lines 9-14. The instant viscosity is taught at col. 5, lines 23-25.

The instant invention further recites various additives such as impact modifier and reinforcing fillers over White et al. However, use of such additives in thermoplastic composition in order to improve mechanical properties is well known as taught by Adedeji et al and Jalbert et al.

It would have been obvious to one skilled in the art at the time of invention to utilize the art well known additives such as impact modifier and/or reinforcing fillers for thermoplastics such as PPE taught by Adedeji et al and Jalbert et al in White et al in order to improve mechanical properties and/or to impart flame retardancy since such practice is well known in the art.

Claims 1-12, 14 and 16-21 are rejected under 35 U.S.C. 103(a) as obvious over Braat et al (US 6,306,978) in view of Geprags et al (US 2003/0130403 A1).

Rejection is maintained for reason of record with following response.

Applicant asserts that Braat does not teach a capped poly(arylene ether) in combination with impact modifier, reinforcing filler, flame retardant and combination thereof, and it is true. Had Braat et al taught such, it would have been anticipation rejection. That is why this is 103(a) rejection.

Applicant asserts that the examiner failed to provide a *prima facie* obviousness since Braat et al and the combined prior art failed to meet the instant claims. But, again, the examiner disagrees with applicant for following repeated reasons;

1. Said col. 7, lines 55-60 teaches added benefits of said capped PPE over non-capped PPE by stating various properties not found in said non-capped PPE. Such teaching does not exclude use of said capped PPE in applications where non-capped PPE is used as evidenced by the teaching in Brief Description of Related Art wherein Braat

also teaches that most commercial PPE are sold as blends with polystyrene resins. Thus, addition of polystyrene to the capped PPE containing a component such as glass fiber would be a *prima facie* obviousness.

2. Braat et al teach the objective of his invention in the section (Brief Description of Related Art); PPE having a lower viscosity and thus yielding an easier process by endcapping said PPE. Thus, use of said capped PPE in applications where non-capped PPE is used would be a *prima facie* obviousness contrary to applicant's assertion.

3. Even if assuming that Braat does not suggest use of said capped PPE with the instant component explicitly (the examiner does not think so though), and **the instant invention (for example, a composition comprising 15-99.9 wt% of the capped PPE and 0.1-85 wt% of glass filler or flame retardant) would be a *prima facie* obviousness to one skilled in the art when the instant end-capped PPE is known in the art since adding some glass fiber or flame retardant to any polymer (or said end-capped PPE) in order to obtain improved mechanical properties and flame retarfancy, respectively, is very well known common practice in the art as partly evidenced by teaching of Geprags. In another words, the examiner does not think that adding some glass fiber or flame retardant to the known polymer (the end-capped PPE in this case) itself would be patentable absent unexpected result**.

4. Again, note that Geprags et al is cited to show the well known additives for polymers, not the end-capped PPO and amounts thereof contrary to applicant's assertion as pointed out in office action of 08/06/2007.

5. Showings in the instant table 2 on page 14 are inconclusive for following reasons;

1. Scope of claims is broader than said showing with respect to components and amounts thereof.

2. Tensile strength at break at a particular temperature is not claimed limitation.

Now, applicant considers Ex. 3 (as well as 5 and 6) as a comparative example, and comparison of said ex. 3 and the inventive ex.13 does not show unexpected result for following reasons; 1). A higher tensile strength of said ex. 13 would be expected since it was reinforced with 20 wt.% of glass fiber. 2). Said ex. 13 lost about 16% value of said tensile strength from unaged sample to one aged at 175°C, but said ex. 3 did not loose any value (actually the value had increased) in tensile strength from unaged sample to one aged at 175°C. Furthermore, said ex. 13 does not have a tensile strength value for 190°C. Thus, there is no unexpected result.

3. The primary references teach the instant capped PPE, and thus comparative examples with uncapped PPE has no probative value since comparison must be based on the closest prior art.

Claim 15 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tae H. Yoon whose telephone number is (571) 272-1128. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Tae H Yoon
Primary Examiner
Art Unit 1796

THY/October 21, 2008

/Tae H Yoon/